

SEQUENCE LISTING

<110> Jacobs, Kenneth
McCoy, John M.
LaVallie, Edward R.
Collins-Racie, Lisa A.
Evans, Cheryl
Merberg, David
Treacy, Maurice
Agostino, Michael J.
Steininger II, Robert J.
Bowman, Michael R.
DiBlasio-Smith, Elizabeth
Widom, Angela

195

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<150> US 60/093,712

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 50      55      60
Glu Met Asp Leu Glu Lys Thr Arg Ser Glu Arg Gly Asp Gly Ser Asp
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6069-74A.SEQ.txt

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 Phe Pro Glu Glu Ala Ile Leu His Asp Ile Ser Ser Asn Val Thr Phe
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 Leu Ile Phe Gln Ile His Ser Gln Tyr Gln Asn Thr Thr Val Ser Phe
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 130 135 140
 Leu Asp Ile Asp Pro Asn Ile Tyr Leu Glu Tyr Asn Phe Phe Glu Thr
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 Pro Pro Pro Cys Asp Ala Gly Thr Asp Gln Asp Ser Arg Trp Arg Leu
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 His Thr Tyr Ala Cys Ser Phe Glu Ala Gly Glu Gly Ser Cys Ala Ser
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6069-74A.SEQ.txt

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Pro Glu His Leu Val Lys Gly Glu Ser Trp Pro Glu Thr Leu Val His
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Ser Tyr Ala Arg Asp Glu Leu Thr Gln Ser Phe His Arg Leu Ser Val
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Cys Val Tyr Gly Asn Asn Leu His Gly Asn Ser Glu Val Asn Leu His
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Gly Cys Arg Asp Leu Gly Gly Asp Trp Ala Pro Phe Pro His Asp Ile
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Leu Pro Tyr Gln Asp Ser Gly Asp Ser Gly Ser Asp Tyr Leu Phe Pro
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Tyr Glu Glu Leu Trp Leu Glu Glu Gly Lys Pro Ser His Gln Pro Leu
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 340 345 350
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 355 360 365
 Cys Asn Arg Val Lys Thr Asp Ser Val Asp Leu Lys Ser Pro Phe Gly
 370 375 380
 Ser Pro Ser Ala Glu Ala Val Ser Ser Arg Leu Ser Trp Pro Asn His
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 565 570 575
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6069-74A.SEQ.txt

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Gly Phe Leu Phe Gln Lys Val Gly Lys Leu Ala Ala Thr Ala Val Gly
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Gly Gly Phe Leu Leu Leu Gln Ile Ala Ser His Ser Gly Tyr Val Gln
85 90 95
Ile Asp Trp Lys Arg Val Glu Lys Asp Val Asn Lys Ala Lys Arg Gln
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Ile Lys Lys Arg Ala Asn Lys Ala Ala Pro Glu Ile Asn Asn Leu Ile
115 120 125

6069-74A.SEQ.txt

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 <213> Homo sapiens

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 35 40 45
 Ser Gly Pro Ala Leu Ala Ser Ser Pro Gln Ile Leu Ser Val Phe Ser
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Leu Gly Phe Pro Gly Phe Val Asn Gly Ser Cys Val Ser Arg Tyr Lys
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Pro Asp Ile Ile Ser Pro Pro Gly Leu Pro Pro Pro Asp Leu Pro Ser
85 90 95
Ser Val Ser Ile Phe Tyr Leu Gln Leu Leu Cys Ser His Gly His Cys
100 105 110
Cys Ile Thr Glu Ser Gly Pro Leu Leu Ser Phe Ser Asn Trp Pro Pro
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Lys Leu Ser Pro Ala Arg Ser Pro Leu Ser Glu Lys Pro Pro Leu Thr
145 150 155 160
Trp Lys His His Cys Leu Ala His Ile Leu Thr Tyr Ser Pro Ser Arg
165 170 175
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195 200 205

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<211> 2216
<212> DNA
<213> Homo sapiens

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6069-74A.SEQ.txt

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 <211> 126
 <212> PRT
 <213> Homo sapiens

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 Cys Val Leu Gln Val His Ala Ala Lys Val Ile Pro Ala His Pro Cys
 35 40 45
 Pro Val Ser Val Ser Phe Arg Val Ile Pro Tyr Leu Ser Ile Gly Gly
 50 55 60
 Leu Ile Leu Leu Asp Phe Leu Lys Thr Leu Arg Trp Ser Ile Arg Ser
 65 70 75 80
 Asp Phe Ser His Ser Ser Ala Gly Glu Leu Arg Ile Thr Ser Ser Phe
 85 90 95
 Gly Arg Trp Ser Trp Val Arg Gly Ser Trp Tyr Thr Val Phe Ile Val
 100 105 110
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<210> 13
 <211> 1426
 <212> DNA
 <213> Homo sapiens

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<210> 14
 <211> 80
 <212> PRT
 <213> Homo sapiens

<400> 14

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Cys Ser Ser Pro Ser Ile Tyr Leu Ser Leu Ser Leu Leu Val Gly His
 35 40 45

Phe Val Cys Arg Ala Val Glu Asn Arg Thr Ser Glu Leu Asn Ile Cys
 50 55 60

Pro Asp Val Lys Val Leu Phe Met Thr Thr Leu Leu Ser Met Tyr Met
 65 70 75 80

<210> 15
 <211> 2364
 <212> DNA
 <213> Homo sapiens

<400> 15

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2340
aaaaaaaaaa aaaaaaaaaa aaaa 2364

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<210> 16
 <211> 463
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Arg Pro Thr Asp Arg Pro Ile Pro Pro Arg Asp Glu Val Phe Glu Tyr
 50 55 60
 Ile Ile Phe Arg Gly Ser Asp Ile Lys Asp Leu Thr Val Cys Glu Pro
 65 70 75 80
 Pro Lys Pro Gln Cys Ser Leu Pro Gln Asp Pro Ala Ile Val Gln Ser
 85 90 95
 Ser Leu Gly Ser Ser Thr Ser Ser Phe Gln Ser Met Gly Ser Tyr Gly
 100 105 110
 Pro Phe Gly Arg Met Pro Thr Tyr Ser Gln Phe Ser Pro Ser Ser Leu
 115 120 125
 Val Gly Gln Gln Phe Gly Ala Val Gly Val Ala Gly Ser Ser Leu Thr
 130 135 140
 Ser Phe Gly Thr Glu Thr Ser Asn Ser Gly Thr Leu Pro Gln Ser Ser
 145 150 155 160
 Ala Val Gly Ser Ala Phe Thr Gln Asp Thr Arg Ser Leu Lys Thr Gln
 165 170 175
 Leu Ser Gln Gly Arg Ser Ser Pro Gln Leu Asp Pro Leu Arg Lys Ser
 180 185 190
 Pro Thr Met Glu Gln Ala Val Gln Thr Ala Ser Ala His Leu Pro Ala
 195 200 205
 Pro Ala Ala Val Gly Arg Arg Ser Pro Val Ser Thr Arg Pro Leu Pro
 210 215 220
 Ser Ala Ser Gln Lys Ala Gly Glu Asn Gln Glu His Arg Gln Ala Glu

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Gly	Gly	His 275	Arg	Gly	Gly	Arg	Gly 280	Arg	Phe	Gly	Ile	Arg 285	Arg	Asp	Gly
Pro	Met 290	Lys	Phe	Glu	Lys	Asp 295	Phe	Asp	Phe	Glu	Ser 300	Ala	Asn	Ala	Gln
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Lys	Glu	Asp	Lys	Leu 325	Glu	Lys	Gln	Glu	Lys 330	Pro	Val	Asn	Gly	Glu 335	Asp
Lys	Gly	Asp	Ser 340	Gly	Val	Asp	Thr	Gln 345	Asn	Ser	Glu	Gly	Asn 350	Ala	Asp
Glu	Glu	Asp 355	Pro	Leu	Gly	Pro	Asn 360	Cys	Tyr	Tyr	Asp	Lys 365	Thr	Lys	Ser
Phe	Phe 370	Asp	Asn	Ile	Ser	Cys 375	Asp	Asp	Asn	Arg	Glu 380	Arg	Arg	Pro	Thr
Trp 385	Ala	Glu	Glu	Arg	Arg 390	Leu	Asn	Ala	Glu	Thr 395	Phe	Gly	Ile	Pro	Leu 400
Arg	Pro	Asn	Arg	Gly 405	Arg	Gly	Gly	Tyr	Arg 410	Gly	Arg	Gly	Gly	Leu 415	Gly
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<211> 2760
<212> DNA
<213> Homo sapiens
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<210> 18
 <211> 660
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Pro Glu Val Thr Pro Ser Arg Leu Ala Ser Ile Ile Gly Val Lys Ser
 50 55 60
 Leu Pro Pro Ala Asp Ile Ser Asp Ile Ile His Ser Thr Glu Lys Gly
 65 70 75 80
 Asp Trp Asn Lys Leu Gly Ile Leu Asp Met Phe Leu Gly Cys Ile Ala
 85 90 95
 Lys Ala Leu Thr Val Gln Leu Lys Ala Lys Gly Thr Thr Ile Thr Gly
 100 105 110
 Thr Ala Gly Thr Thr Val Gly Lys Gly Val Thr Thr Val Thr Leu Pro

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Gly Arg Gly Asp Asp Tyr Asp Pro Arg Glu Leu Ile Cys Gly Ala Cys
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 35 40 45
 Arg Gly Val Trp Gly Gly His Met Glu Leu Pro Leu Trp Gly Gly Pro
 50 55 60
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6069-74A.SEQ.txt

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 <212> PRT
 <213> Homo sapiens

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 Ser Lys Ala Pro Ala Ser Ser Ser Ser Asn Pro Glu Glu Val Gln Lys
 35 40 45
 Glu Gly Pro Thr Ala Leu Gln Asp Ser Asn Ser Gly Glu Pro Asp Ile
 50 55 60
 Pro Pro Pro Gln Pro Asp Cys Gly Asp Phe Arg Ser Leu Gln Glu Glu
 65 70 75 80
 Gln Ser Arg Pro Thr Thr Ala Val Ser Ser Pro Gly Gly Pro Ala Arg
 85 90 95
 Ala Pro Pro Tyr Gln Glu Pro Pro Trp Gly Gly Pro Ala Thr Ala Pro
 100 105 110
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 Leu Lys Gly Thr Ser Tyr Cys Leu Phe Gly Arg Leu Ser Gly Cys Asp

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Phe	Tyr	Leu	Tyr	Asp	Leu	Gly	Ser	Thr	His	Gly	Thr	Phe	Leu	Asn	Lys		
			180					185					190				
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		195					200					205					
Val	Arg	Phe	Gly	Gly	Ser	Thr	Arg	Leu	Phe	Ile	Leu	Gln	Gly	Pro	Glu		
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225					230					235					240		
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			260					265					270				
Ala	Gly	Ser	Gln	Asp	Asp	Glu	Met	Gly	Cys	Thr	Trp	Gly	Met	Gly	Glu		
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Asp	Ala	Val	Glu	Asp	Asp	Ala	Glu	Glu	Asn	Pro	Ile	Val	Leu	Glu	Phe		
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 35 40 45
 Ser Arg Val Ala Thr Ser Thr Asp Pro Ser Cys Ser Gly Phe Ala Pro
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 Pro Asp Phe Asn His Cys Leu Lys Asp Trp Asp Tyr Asn Gly Leu Pro
 65 70 75 80
 Val Leu Thr Thr Asn Ala Ile Gly Gln Trp Asp Leu Val Cys Asp Leu
 85 90 95
 Gly Trp Gln Val Ile Leu Glu Gln Ile Leu Phe Ile Leu Gly Phe Ala
 100 105 110
 Ser Gly Tyr Leu Phe Leu Gly Tyr Pro Ala Asp Arg Phe Gly Arg Arg
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 165 170 175

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 Glu Leu Val Gly Val Gly Gly His Phe Leu Phe Leu Gly Leu Ala Leu
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 Val Ser Lys Asp Trp Arg Phe Leu Gln Arg Met Ile Thr Ala Pro Cys
 210 215 220
 Ile Leu Phe Leu Phe Tyr Gly Trp Pro Gly Leu Phe Leu Glu Ser Ala
 225 230 235 240
 Arg Trp Leu Ile Val Lys Arg Gln Ile Glu Glu Ala Gln Ser Val Leu
 245 250 255
 Arg Ile Leu Ala Glu Arg Asn Arg Pro His Gly Gln Met Leu Gly Glu
 260 265 270
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 275 280 285
 Ala Thr Ser Ser Phe Ser Phe Ala Ser Leu Leu Asn Tyr Arg Asn Ile
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 Trp Lys Asn Leu Leu Ile Leu Gly Phe Thr Asn Phe Ile Ala His Ala
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 Ile Arg His Cys Tyr Gln Pro Val Gly Gly Gly Gly Ser Pro Ser Asp
 325 330 335
 Phe Tyr Leu Cys Ser Leu Leu Ala Ser Gly Thr Ala Ala Leu Ala Cys
 340 345 350
 Val Phe Leu Gly Val Thr Val Asp Arg Phe Gly Arg Arg Gly Ile Leu
 355 360 365
 Leu Leu Ser Met Thr Leu Thr Gly Ile Ala Ser Leu Val Leu Leu Gly
 370 375 380
 Leu Trp Asp Tyr Leu Asn Glu Ala Ala Ile Thr Thr Phe Ser Val Leu
 385 390 395 400
 Gly Leu Phe Ser Ser Gln Ala Ala Ala Ile Leu Ser Thr Leu Leu Ala
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 Ala Glu Val Ile Pro Thr Thr Val Arg Gly Arg Gly Leu Gly Leu Ile
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 Met Ala Leu Gly Ala Leu Gly Gly Leu Ser Gly Pro Ala Gln Arg Leu
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 His Met Gly His Gly Ala Phe Leu Gln His Val Val Leu Ala Ala Cys
 450 455 460
 Ala Leu Leu Cys Ile Leu Ser Ile Met Leu Leu Pro Glu Thr Lys Arg
 465 470 475 480
 Lys Leu Leu Pro Glu Val Leu Arg Asp Gly Glu Leu Cys Arg Arg Pro
 485 490 495
 Ser Leu Leu Arg Gln Pro Pro Pro Thr Arg Cys Asp His Val Pro Leu
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<211> 351
<212> PRT
<213> Homo sapiens

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6069-74A.SEQ.txt

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 85 90 95
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 115 120 125
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 145 150 155 160
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 165 170 175
 Phe Glu Cys Gly Val Gln Glu Asn Leu Trp Ile Cys Leu Ile Cys Gly
 180 185 190
 His Ile Gly Cys Gly Arg Tyr Val Ser Arg His Ala Tyr Lys His Phe
 195 200 205
 Glu Glu Thr Gln His Thr Tyr Ala Met Gln Leu Thr Asn His Arg Val
 210 215 220
 Trp Asp Tyr Ala Gly Asp Asn Tyr Val His Arg Leu Val Ala Ser Lys
 225 230 235 240
 Thr Asp Gly Lys Ile Val Gln Tyr Glu Cys Glu Gly Asp Thr Cys Gln
 245 250 255
 Glu Glu Lys Ile Asp Ala Leu Gln Leu Glu Tyr Ser Tyr Leu Leu Thr
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 Ser Gln Leu Glu Ser Gln Arg Ile Tyr Trp Glu Asn Lys Ile Val Arg
 275 280 285
 Ile Glu Lys Asp Thr Ala Glu Glu Ile Asn Asn Met Lys Thr Lys Phe
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 305 310 315 320
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 325 330 335
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<210> 27
 <211> 460

6069-74A.SEQ.txt

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<213> Homo sapiens

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 35 40 45
 Ile Phe Leu Met Met Met Thr Ser Ser Glu Met Pro Ser Gly Cys Arg
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6069-74A.SEQ.txt

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<210> 30
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 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Ala Thr Glu Asp Asp Leu Val Glu Met Gln Gly Tyr Lys Asp Lys Leu
 50 55 60
 Ser Ile Ile Gly Glu Val Leu Ser Arg Arg His Met Lys Val Ala Phe
 65 70 75 80
 Phe Gly Arg Thr Ser Ser Gly Lys Ser Ser Val Ile Asn Ala Met Leu
 85 90 95
 Trp Asp Lys Val Leu Pro Ser Gly Ile Gly His Ile Thr Asn Cys Phe
 100 105 110

6069-74A.SEQ.txt

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 Gly Ser Asp Glu Lys Lys Ser Val Lys Thr Val Asn Gln Leu Ala His
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 Ala Leu His Met Asp Lys Asp Leu Lys Ala Gly Cys Leu Val Arg Val
 145 150 155 160
 Phe Trp Pro Lys Ala Lys Cys Ala Leu Leu Arg Asp Asp Leu Val Leu
 165 170 175
 Val Asp Ser Pro Gly Thr Asp Val Thr Thr Glu Leu Asp Ser Trp Ile
 180 185 190
 Asp Lys Phe Cys Leu Asp Ala Asp Val Phe Val Leu Val Ala Asn Ser
 195 200 205
 Glu Ser Thr Leu Met Asn Thr Glu Lys His Phe Phe His Lys Val Asn
 210 215 220
 Glu Arg Leu Ser Lys Pro Asn Ile Phe Ile Leu Asn Asn Arg Trp Asp
 225 230 235 240
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 245 250 255
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 260 265 270
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 275 280 285
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 325 330 335
 Phe Glu Gln His Thr Ile Arg Ala Lys Gln Ile Leu Ala Thr Val Lys
 340 345 350
 Asn Ile Met Asp Ser Val Asn Leu Ala Ala Glu Asp Lys Arg His Tyr
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 Ser Val Glu Glu Arg Glu Asp Gln Ile Asp Arg Leu Asp Phe Ile Arg
 370 375 380
 Asn Gln Met Asn Leu Leu Thr Leu Asp Val Lys Lys Lys Ile Lys Glu
 385 390 395 400
 Val Thr Glu Glu Val Ala Asn Lys Val Ser Cys Ala Met Thr Asp Glu
 405 410 415
 Ile Cys Arg Leu Ser Val Leu Val Asp Glu Phe Cys Ser Glu Phe His
 420 425 430
 Pro Asn Pro Asp Val Leu Lys Ile Tyr Lys Ser Glu Leu Asn Lys His
 435 440 445

6069-74A.SEQ.txt

Ile Glu Asp Gly Met Gly Arg Asn Leu Ala Asp Arg Cys Thr Asp Glu
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 Cys Ser Asp Phe Gln Glu Asp Ile Val Phe Arg Phe Ser Leu Gly Trp
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 Ser Ser Leu Val His Arg Phe Leu Gly Pro Arg Asn Ala Gln Arg Val
 530 535 540
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 Ser Thr Pro Thr Ala Pro Thr Thr Pro Ala Thr Pro Asp Asn Ala Ser
 565 570 575
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 580 585 590
 Ser Arg Thr Ser Met Gly Ile Ile Ile Val Gly Gly Val Ile Trp Lys
 595 600 605
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 610 615 620
 Leu Tyr Leu Tyr Glu Arg Leu Ser Trp Thr Thr His Ala Lys Glu Arg
 625 630 635 640
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 645 650 655
 Ile Val Ser Ser Thr Ser Ala Asn Cys Ser His Gln Val Lys Gln Gln
 660 665 670
 Ile Ala Thr Thr Phe Ala Arg Leu Cys Gln Gln Val Asp Ile Thr Gln
 675 680 685
 Lys Gln Leu Glu Glu Glu Ile Ala Arg Leu Pro Lys Glu Ile Asp Gln
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 <212> DNA
 <213> Homo sapiens

6069-74A.SEQ.txt

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<211> 654

<212> PRT

<213> Homo sapiens

<400> 32

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Ser Asp Val Ser Leu Leu Asn Tyr Gln Ser Ala Leu Tyr Pro Ser Ser
      35           40           45

Ala Ala Pro Val Pro Gly Val Ala Gln Gln Gly Val Ser Leu Gln Pro
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Gly Thr Thr Gln Ile Cys Thr Gln Thr Asp Pro Phe Gln Gln Thr Phe

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	370					375					380				
Asp	Ser	Pro	Asp	Ser	Asp	Ser	Ser	Leu	Ser	Ser	Pro	Tyr	Ser	Thr	Asp
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405

410

415

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 <212> PRT
 <213> Homo sapiens

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 Gly Lys Asn Tyr Phe Ser Phe Gly Lys Ile Leu Phe Arg Asn Thr Thr
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 100 105 110
 Gly Leu Ser Gly Lys Tyr Gln Thr Ser Ser Lys Leu Phe Gln Asn Cys
 115 120 125
 Ser Glu Leu Phe Lys Thr Gln Thr Phe Ser Gly Asp Phe Met His Arg
 130 135 140
 Leu Pro Leu Leu Gly Glu Lys Gln Glu Ala Lys Glu Asn Gly Thr Asn
 145 150 155 160
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 Trp Gln Asp Ala Pro Tyr Ile Phe Ile Val His Ile Gly Ile Ser Ser
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 Ser Lys Glu Ser Ser Lys Glu Asn Ser Leu Ser Asn Leu Phe Thr Met
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 Pro Leu Met Ile Phe Phe Met Val Met Cys Ile Val Tyr Val Leu Phe
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 Lys Ala Val Phe Tyr Ala Glu Phe Gln Asn Ile Arg His Lys Gly Glu
 275 280 285
 Ser Val Gln Gly Ala Leu Ile Leu Ala Glu Leu Leu Ser Ala Val Lys
 290 295 300
 Arg Ser Leu Ala Arg Thr Leu Val Ile Ile Val Ser Leu Gly Tyr Gly
 305 310 315 320
 Ile Val Lys Pro Arg Leu Gly Val Thr Leu His Lys Val Val Val Ala
 325 330 335
 Gly Ala Leu Tyr Leu Leu Phe Ser Gly Met Glu Gly Val Leu Arg Val
 340 345 350
 Thr Gly Ala Gln Thr Asp Leu Ala Ser Leu Ala Phe Ile Pro Leu Ala
 355 360 365
 Phe Leu Asp Thr Ala Leu Cys Trp Trp Ile Phe Ile Ser Leu Thr Gln
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 Thr Met Lys Leu Leu Lys Leu Arg Arg Asn Ile Val Lys Leu Ser Leu
 385 390 395 400

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Tyr Arg His Phe Thr Asn Thr Leu Ile Leu Ala Val Ala Ala Ser Ile
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<212> DNA
<213> Homo sapiens

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Ser Thr Pro Gly Trp Gly Thr Gly Glu Trp Ala Thr Gly Gly Ala Ile
35 40 45
Leu Gly Arg Pro Thr Pro Cys Ala Val Pro Gly Thr Gly Phe Ser Leu
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Gly Trp Arg Val Pro Thr Pro Cys Ser Leu Pro Asp Leu Leu Arg Asp
85 90 95
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100 105 110
Leu Asn Ala Leu His Gly Pro Val Cys Gly Thr Gly Gly Gln Val Gln
115 120 125
Trp Cys Ala Glu Leu His Trp Glu Asp Phe Gln Arg Gly Arg Ala Ala
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<211> 132
<212> PRT
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6069-74A.SEQ.txt

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Thr Leu Asp Arg Asp Ser Ser Gln Pro Arg Arg Thr Ile Ala Arg Gln
50 55 60
Thr Ala Arg Cys Ala Cys Arg Lys Gly Gln Ile Ala Gly Thr Thr Arg
65 70 75 80
Ala Arg Pro Ala Cys Val Asp Ala Arg Ile Ile Lys Thr Lys Gln Trp
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Cys Asp Met Leu Pro Cys Leu Glu Gly Glu Gly Cys Asp Leu Leu Ile
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<212> DNA

<213> Homo sapiens

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<211> 230

<212> PRT

<213> Homo sapiens

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Ala	Gly	Ile	Asp	Trp	Gly	Ile	Phe	Pro	Glu	Ser	Asp	Ser	Lys	Asp	Pro
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Leu	Asp	Glu	Leu	Met	Glu	Leu	Glu	Ile	Phe	Leu	Ala	Gln	Arg	Ala	Val
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Glu	Leu	Ser	Glu	Glu	Ala	Asp	Val	Leu	Ser	Val	Ser	Gln	Phe	Gln	Leu
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Gln	His	Leu	Phe	Met	Ile	Leu	Ala	Ser	Pro	Arg	Ser	Gly	Phe	Pro	Leu
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 <212> DNA
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<400> 41

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<210> 42
<211> 240
<212> PRT
<213> Homo sapiens

<400> 42
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Gly Leu Glu Ser Gly Gln Pro Leu Tyr Leu Leu Glu Leu Asn Trp Gly
35 40 45
Gly Thr Glu Cys Val Leu Ser Ser Thr Gly Arg Thr Ala Ala Cys Phe
50 55 60
Leu Pro Thr Ser Leu Leu Pro Thr Ser Pro Ala Ala Trp Leu Gly Pro
65 70 75 80
Glu Ala Leu Cys Leu Pro Gly Arg Pro Gly Thr Thr Gly Leu Arg Asp
85 90 95
Thr Gly Gly Pro Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Thr
100 105 110
Thr Arg Trp Cys Trp Met Leu Val Leu Trp Pro Ala Lys Val His Gly
115 120 125
Asp Ser Pro His Gly Ile Leu Arg Asp Gln Ala Ala Gly Ile Gly Lys
130 135 140
Glu Phe His Pro Asp Arg Cys Pro Ser Gln Val Pro Arg Arg Pro His
145 150 155 160
His Thr Pro Phe Gln Gly Gln Gly Ser Ser Lys Pro Arg Ala Arg Ile
165 170 175
Leu Cys Cys Cys Leu Val Glu Ser Leu Pro Pro Cys Val Gly Ser Val
180 185 190
Gly Gln Ala Glu Cys Ile Gly Asp Arg Ala Val Ser Met Gly Leu Gly
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<211> 1784
<212> DNA
<213> Homo sapiens

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<210> 44
 <211> 82
 <212> PRT
 <213> Homo sapiens

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 Pro Phe Ile Phe Phe Asn Asn Cys Ile Ser Ala Gln Val Ile His Tyr
 35 40 45
 Ser Leu Lys Pro Cys Leu Cys Asn Leu Thr Ser Asp Met Leu Ala Ile
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<210> 45
 <211> 1034
 <212> DNA
 <213> Homo sapiens

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<400> 45

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<210> 46
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 46
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 35 40 45
 Arg Asp His Pro His Thr Ala Ala Tyr Leu Gln Glu Leu Gly Arg Met
 50 55 60
 Arg Lys Val Val Leu Glu Ala Pro Asp Glu Thr Thr Leu Lys Glu Leu
 65 70 75 80
 Ala Glu Thr Leu Gln Gln Lys Asn Ile Asp His Met Leu Trp Leu Glu
 85 90 95
 Gln Pro Glu Asn Ile Ala Thr Cys Ile Ala Leu Arg Pro Tyr Pro Lys
 100 105 110
 Glu Glu Val Gly Gln Tyr Leu Lys Lys Phe Arg Leu Phe Lys
 115 120 125

<210> 47
 <211> 1626
 <212> DNA
 <213> Homo sapiens

<400> 47
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<210> 48
 <211> 368
 <212> PRT
 <213> Homo sapiens

<400> 48
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 Tyr Ile Phe Leu Cys Leu Met Cys Trp Val Arg Ser Asp Asn Lys Arg
 35 40 45
 Pro Cys Leu Glu Phe Ser Gln Leu Ser Val Lys Asp Ser Phe Arg Asp
 50 55 60
 Leu Phe Ile Pro Arg Ile Glu Thr Ile Leu Met Met Tyr Thr Arg Asn
 65 70 75 80
 Asn Leu Asn Cys Ala Glu Pro Leu Phe Glu Gln Asn Asn Ser Leu Asn
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 Val Asn Phe Asn Thr Gln Lys Lys Thr Val Trp Leu Ile His Gly Tyr
 100 105 110
 Arg Pro Val Gly Ser Ile Pro Leu Trp Leu Gln Asn Phe Val Arg Ile
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 145 150 155 160
 Val Ala Val Ser Leu Ser Val His Ile Lys Asn Leu Leu Lys His Gly
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 Ala Ser Leu Asp Asn Phe His Phe Ile Gly Val Ser Leu Gly Ala His
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Ile Ser Gly Phe Val Gly Lys Ile Phe His Gly Gln Leu Gly Arg Ile
195 200 205
Thr Gly Leu Asp Pro Ala Gly Pro Arg Phe Ser Arg Lys Pro Pro Tyr
210 215 220
Ser Arg Leu Asp Tyr Thr Asp Ala Lys Phe Val Asp Val Ile His Ser
225 230 235 240
Asp Ser Asn Gly Ile Gln Phe Ile Lys Cys Asn His Gln Arg Ala Val
245 250 255
His Leu Phe Met Ala Ser Leu Glu Thr Asn Cys Asn Phe Ile Ser Phe
260 265 270
Pro Cys Arg Ser Tyr Lys Asp Tyr Lys Thr Ser Leu Cys Val Asp Cys
275 280 285
Asp Cys Phe Lys Glu Lys Ser Cys Pro Arg Leu Gly Tyr Gln Ala Lys
290 295 300
Leu Phe Lys Gly Val Leu Lys Glu Arg Met Glu Gly Arg Pro Leu Arg
305 310 315 320
Thr Thr Val Phe Leu Asp Thr Ser Ala Tyr Tyr Phe Val Leu Ser Ile
325 330 335
Ile Val Pro Asp Lys Thr Met Met Asp Gly Ser Phe Ser Phe Lys Leu
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<210> 49
<211> 1221
<212> DNA
<213> Homo sapiens

<400> 49
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<210> 50

<211> 305

<212> PRT

<213> Homo sapiens

<400> 50

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Asn Ile His Arg Gly Phe Tyr Cys Leu Thr Ala Ile Leu Pro Gln Ile
          20           25           30
Cys Ile Cys Ser Gln Phe Ser Val Pro Ser Ser Tyr His Phe Thr Glu
          35           40           45
Asp Pro Gly Ala Phe Pro Val Ala Thr Asn Gly Glu Arg Phe Pro Trp
          50           55           60
Gln Glu Leu Arg Leu Pro Ser Val Val Ile Pro Leu His Tyr Asp Leu
          65           70           75           80
Phe Val His Pro Asn Leu Thr Ser Leu Asp Phe Val Ala Ser Glu Lys
          85           90           95
Ile Glu Val Leu Val Ser Asn Ala Thr Gln Phe Ile Ile Leu His Ser
          100          105          110
Lys Asp Leu Glu Ile Thr Asn Ala Thr Leu Gln Ser Glu Glu Asp Ser
          115          120          125
Arg Tyr Met Lys Pro Gly Lys Glu Leu Lys Val Leu Ser Tyr Pro Ala
          130          135          140
His Glu Gln Ile Ala Leu Leu Val Pro Glu Lys Leu Thr Pro His Leu
          145          150          155          160
Lys Tyr Tyr Val Ala Met Asp Phe Gln Ala Lys Leu Gly Asp Gly Phe
          165          170          175
Glu Gly Phe Tyr Lys Ser Thr Tyr Arg Thr Leu Gly Gly Glu Thr Arg
          180          185          190
Ile Leu Ala Val Thr Asp Phe Glu Pro Thr Gln Ala Arg Met Ala Phe
          195          200          205
Pro Cys Phe Asp Glu Pro Leu Phe Lys Ala Asn Phe Ser Ile Lys Ile
          210          215          220
Arg Arg Glu Ser Arg His Ile Ala Leu Ser Asn Met Pro Lys Val Ser
          225          230          235          240
Ile Tyr Ala Ser Pro Asp Lys Arg Asn Gln Thr His Tyr Ala Leu Gln
          245          250          255
Ala Ser Leu Lys Leu Leu Asp Phe Tyr Glu Lys Tyr Phe Asp Ile Tyr
          260          265          270
Tyr Pro Leu Ser Lys Leu Gly Met Phe Lys Phe His Ile Ile Val Phe
          275          280          285
Ile Phe Ala His Lys Thr Cys Leu Asp Leu Phe Pro Leu Ser Leu Cys
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Met
305

<210> 51
<211> 951
<212> DNA
<213> Homo sapiens

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gtttgtaaac atggatgtgt gcaaagattt tagctctaag aatgtttgtc agtggttctaa 900
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<210> 52
<211> 194
<212> PRT
<213> Homo sapiens

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<400> 52
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                20                25                30

Gln Pro Arg Ser Ile Ser Glu Ser Phe Leu Thr Val Lys Gly Ala Ala
 35                40                45

Leu Phe Leu Pro Arg Gly Asn Gly Ser Ser Thr Pro Arg Ile Ser His
 50                55                60

Arg Arg Asn Lys His Ala Gly Asp Leu Gln Gln His Leu Gln Ala Met
 65                70                75                80

Phe Ile Leu Leu Arg Pro Glu Asp Asn Ile Arg Leu Ala Val Arg Leu
                85                90                95

Glu Ser Thr Tyr Gln Asn Arg Thr Arg Tyr Met Val Val Val Ser Thr
 100                105                110

Asn Gly Arg Gln Asp Thr Glu Glu Ser Ile Val Leu Gly Met Asp Phe
 115                120                125

Ser Ser Asn Asp Ser Thr Cys Thr Met Gly Leu Val Leu Pro Leu Trp
 130                135                140

Ser Asp Thr Leu Ile His Leu Asp Gly Asp Gly Gly Phe Ser Val Ser
 145                150                155                160
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Thr Asp Asn Arg Val His Ile Phe Lys Pro Val Ser Val Gln Ala Met
165 170 175

Trp Val Asp Arg Asp Ser Arg Asn Lys His Cys Asp Val Leu Leu Val
180 185 190

Glu Glu

<210> 53
<211> 1514
<212> DNA
<213> Homo sapiens

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<210> 54
<211> 91
<212> PRT
<213> Homo sapiens

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20 25 30
Pro Leu His Phe Tyr Phe Phe Ile Gln Gln Val Leu Ile Lys Cys Ala
35 40 45
Leu Tyr Gln Val Leu Ser Ser Ser Leu Gly Tyr Asn Gly Asp Gln Gly
50 55 60
Asp Cys Arg Phe Trp Gln Gly Lys Leu Thr Ser Asn Thr Ala Thr Arg
65 70 75 80

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His Ser Glu Thr Leu Ser Leu Leu Glu Glu Leu
85 90

<210> 55
<211> 1417
<212> DNA
<213> Homo sapiens

<400> 55
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<210> 56
<211> 420
<212> PRT
<213> Homo sapiens

<400> 56
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Gln Ser Pro Met Asn Asn Leu Gln Thr Asn Thr Val Ala Gln Glu Ala
35 40 45
Phe Phe Ala Ala Pro Asn Ser Ile Ser Pro Leu Gln Ser Thr Ser Asn
50 55 60
Ser Glu Gln Gln Ala Ala Phe Gln Gln Gln Ala Pro Ile Ser His Ile
65 70 75 80
Gln Thr Pro Met Leu Ser Gln Glu Gln Ala Gln Pro Pro Gln Gln Gly
85 90 95
Leu Phe Gln Pro Gln Val Ala Leu Gly Ser Leu Pro Pro Asn Pro Met
100 105 110

6069-74A.SEQ.txt

Pro Gln Ser Gln Gln Gly Thr Met Phe Gln Ser Gln His Ser Ile Val
115 120 125

Ala Met Gln Ser Asn Ser Pro Ser Gln Glu Gln Gln Gln Gln Gln
130 135 140

Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Ser Ile Leu Phe Ser
145 150 155 160

Asn Gln Asn Thr Met Ala Thr Met Ala Ser Pro Lys Gln Pro Pro Pro
165 170 175

Asn Met Ile Phe Asn Pro Asn Gln Asn Pro Met Ala Asn Gln Glu Gln
180 185 190

Gln Asn Gln Ser Ile Phe His Gln Gln Ser Asn Met Ala Pro Met Asn
195 200 205

Gln Glu Gln Gln Pro Met Gln Phe Gln Ser Gln Ser Thr Val Ser Ser
210 215 220

Leu Gln Asn Pro Gly Pro Thr Gln Ser Glu Ser Ser Gln Thr Pro Leu
225 230 235 240

Phe His Ser Ser Pro Gln Ile Gln Leu Val Gln Gly Ser Pro Ser Ser
245 250 255

Gln Glu Gln Gln Val Thr Leu Phe Leu Ser Pro Ala Ser Met Ser Ala
260 265 270

Leu Gln Thr Ser Ile Asn Gln Gln Asp Met Gln Gln Ser Pro Leu Tyr
275 280 285

Ser Pro Gln Asn Asn Met Pro Gly Ile Gln Gly Ala Thr Phe Ser Pro
290 295 300

Gln Pro Gln Ala Thr Leu Phe His Asn Thr Ala Gly Gly Thr Met Asn
305 310 315 320

Gln Leu Gln Asn Ser Pro Gly Ser Ser Gln Gln Thr Ser Gly Met Phe
325 330 335

Leu Phe Gly Ile Gln Asn Asn Cys Ser Gln Leu Leu Thr Ser Gly Pro
340 345 350

Ala Thr Leu Pro Asp Gln Leu Met Ala Ile Ser Gln Pro Gly Gln Pro
355 360 365

Gln Asn Glu Gly Gln Pro Pro Val Thr Thr Leu Leu Ser Gln Gln Met
370 375 380

Pro Glu Asn Ser Pro Leu Ala Ser Ser Ile Asn Thr Asn Gln Asn Ile
385 390 395 400

Glu Lys Ile Asp Leu Leu Val Ser Leu Gln Asn Gln Gly Asn Asn Leu
405 410 415

Thr Gly Ser Phe
420

<210> 57
<211> 2297

6069-74A.SEQ.txt

<212> DNA

<213> Homo sapiens

<400> 57

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<210> 58

<211> 378

<212> PRT

<213> Homo sapiens

<400> 58

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Met Ala Val Ile Gly Leu Pro Tyr Tyr Leu Phe Val Trp Glu Asp Tyr
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Asp Lys Tyr Val Ile Phe Ala Ser Phe Asn Leu Ile Trp Ser Thr Val
          20           25           30
Ile Leu Glu Leu Trp Lys Arg Gly Cys Ala Asn Met Thr Tyr Arg Trp
          35           40           45
Gly Thr Leu Leu Met Lys Arg Lys Phe Glu Glu Pro Arg Pro Gly Phe
          50           55           60
His Gly Val Leu Gly Ile Asn Ser Ile Thr Gly Lys Glu Glu Pro Leu

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<210> 59
<211> 4145
<212> DNA

<213> Homo sapiens

<400> 59

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ctcaattaag	aaaaacagtc	acatgtcacg	acaaaccaat	caatctttat	gagatattcc	3420
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cagaaaaaaa	tggatttcac	agagccttgt	gtccctaag	ttctgtccca	gtcagcagtc	3540
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6069-74A.SEQ.txt

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<210> 60
 <211> 289
 <212> PRT
 <213> Homo sapiens

<400> 60
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 Glu Glu Ala Leu Ser Val Thr Glu Leu Asp Arg Val Tyr Gly Gly Leu
 20 25 30
 Thr Thr Lys Val Gln Glu Ser Leu Lys Lys Gln Glu Gly Leu Leu Lys
 35 40 45
 Asn Ile Gln Val Ser His Gln Glu Phe Ser Lys Met Lys Gln Ser Asn
 50 55 60
 Asn Glu Ala Asn Leu Arg Glu Glu Val Leu Lys Asn Leu Ala Thr Ala
 65 70 75 80
 Tyr Asp Asn Phe Val Glu Leu Val Ala Asn Leu Lys Glu Gly Thr Lys
 85 90 95
 Phe Tyr Asn Glu Leu Thr Glu Ile Leu Val Arg Phe Gln Asn Lys Cys
 100 105 110
 Ser Asp Ile Val Phe Ala Arg Lys Thr Glu Arg Asp Glu Leu Leu Lys
 115 120 125
 Asp Leu Gln Gln Ser Ile Ala Arg Glu Pro Ser Ala Pro Ser Ile Pro
 130 135 140
 Thr Pro Ala Tyr Gln Ser Ser Pro Ala Gly Gly His Ala Pro Thr Pro
 145 150 155 160
 Pro Thr Pro Ala Pro Arg Thr Met Pro Pro Thr Lys Pro Gln Pro Pro
 165 170 175
 Ala Arg Pro Pro Pro Pro Val Leu Pro Ala Asn Arg Ala Pro Ser Ala
 180 185 190
 Thr Ala Pro Ser Pro Val Gly Ala Gly Thr Ala Ala Pro Ala Pro Ser
 195 200 205
 Gln Thr Pro Gly Ser Ala Pro Pro Pro Gln Ala Gln Gly Pro Pro Tyr
 210 215 220
 Pro Thr Tyr Pro Gly Tyr Pro Gly Tyr Cys Gln Met Pro Met Pro Met
 225 230 235 240
 Gly Tyr Asn Pro Tyr Ala Tyr Gly Gln Tyr Asn Met Pro Tyr Pro Pro

245

250

255

Val Tyr His Gln Ser Pro Gly Gln Ala Pro Tyr Pro Gly Pro Gln Gln
 260 265 270

Pro Ser Tyr Pro Phe Pro Gln Pro Pro Gln Gln Ser Tyr Tyr Pro Gln
 275 280 285

Gln

<210> 61

<211> 1417

<212> DNA

<213> Homo sapiens

<400> 61

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caggtgggtc aaagggaaca cagagctaaa aggcaaatcg gaggtggaag agtggtcaga 600
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<210> 62

<211> 414

<212> PRT

<213> Homo sapiens

<400> 62

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 20 25 30

Phe Ser Ala Ala Ala Leu Ile Pro Thr Gly Asp Gly Gln Asn Leu Phe
 35 40 45

Thr Lys Asp Val Thr Val Ile Glu Gly Glu Val Ala Thr Ile Ser Cys
 50 55 60

Gln Val Asn Lys Ser Asp Asp Ser Val Ile Gln Leu Leu Asn Pro Asn
 65 70 75 80

6069-74A.SEQ.txt

Arg Gln Thr Ile Tyr Phe Arg Asp Phe Arg Pro Leu Lys Asp Ser Arg
 85 90 95
 Phe Gln Leu Leu Asn Phe Ser Ser Ser Glu Leu Lys Val Ser Leu Thr
 100 105 110
 Asn Val Ser Ile Ser Asp Glu Gly Arg Tyr Phe Cys Gln Leu Tyr Thr
 115 120 125
 Asp Pro Pro Gln Glu Ser Tyr Thr Thr Ile Thr Val Leu Val Pro Pro
 130 135 140
 Arg Asn Leu Met Ile Asp Ile Gln Lys Asp Thr Ala Val Glu Gly Glu
 145 150 155 160
 Glu Ile Glu Val Asn Cys Thr Ala Met Ala Ser Lys Pro Ala Thr Thr
 165 170
 Ile Arg Trp Phe Lys Gly Asn Thr Glu Leu Lys Gly Lys Ser Glu Val
 180 185 190
 Glu Glu Trp Ser Asp Met Tyr Thr Val Thr Ser Gln Leu Met Leu Lys
 195 200 205
 Val His Lys Glu Asp Asp Gly Val Pro Val Ile Cys Gln Val Glu His
 210 215 220
 Pro Ala Val Thr Gly Asn Leu Gln Thr Gln Arg Tyr Leu Glu Val Gln
 225 230 235 240
 Tyr Lys Pro Gln Val His Ile Gln Met Thr Tyr Pro Leu Gln Gly Leu
 245 250 255
 Thr Arg Glu Gly Asp Ala Leu Glu Leu Thr Cys Glu Ala Ile Gly Lys
 260 265 270
 Pro Gln Pro Val Met Val Thr Trp Val Arg Val Asp Asp Glu Met Pro
 275 280 285
 Gln His Ala Val Leu Ser Gly Pro Asn Leu Phe Ile Asn Asn Leu Asn
 290 295 300
 Lys Thr Asp Asn Gly Thr Tyr Arg Cys Glu Ala Ser Asn Ile Val Gly
 305 310 315 320
 Lys Ala His Ser Asp Tyr Met Leu Tyr Val Tyr Asp Ser Arg Ala Gly
 325 330 335
 Glu Glu Gly Ser Ile Arg Ala Val Asp His Ala Val Ile Gly Gly Val
 340 345 350
 Val Ala Val Val Val Phe Ala Met Leu Cys Leu Leu Ile Ile Leu Gly
 355 360 365
 Arg Tyr Phe Ala Arg His Lys Gly Thr Tyr Phe Thr His Glu Ala Lys
 370 375 380
 Gly Ala Asp Asp Ala Ala Asp Ala Asp Thr Ala Ile Ile Asn Ala Glu
 385 390 395 400
 Gly Gly Gln Asn Asn Ser Glu Glu Lys Lys Glu Tyr Phe Ile
 405 410

<210> 63
 <211> 1571
 <212> DNA
 <213> Homo sapiens

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 gctgggatgc ctaagcctgt cagagttggt cagtataata tcaatacaga agaattatat 240
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 gaccgccgag ttgtgattat cgaatcggtt ttatgtcctt ctcaattcag agagacactc 360
 actcgtgttc ttttcaaata ttttgagggt ccattctgtct tgcttgctcc aagtcattcta 420
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 agcctgggtg taccatata tgaaggaatc ccagttctaa attgttgggg agcactaccc 540
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 gacacaagtg ttgctaaaga acagagcctt ccctcagtga tgggttcagt tccggaaggt 660
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<210> 64
 <211> 417
 <212> PRT
 <213> Homo sapiens

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 20 25 30
 Thr Gly Pro Arg Cys Ile Ile Pro Ser Val Ile Lys Arg Ala Gly Met
 35 40 45
 Pro Lys Pro Val Arg Val Val Gln Tyr Asn Ile Asn Thr Glu Glu Leu
 50 55 60
 Tyr Ser Tyr Leu Lys Glu Phe Ile His Ile Leu Tyr Phe Arg His Leu
 65 70 75 80
 Leu Val Asn Pro Arg Asp Arg Arg Val Val Ile Ile Glu Ser Val Leu
 85 90 95
 Cys Pro Ser His Phe Arg Glu Thr Leu Thr Arg Val Leu Phe Lys Tyr
 100 105 110

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Phe Glu Val Pro Ser Val Leu Leu Ala Pro Ser His Leu Met Ala Leu
 115 120 125
 Leu Thr Leu Gly Ile Asn Ser Ala Met Val Leu Asp Cys Gly Tyr Arg
 130 135 140
 Glu Ser Leu Val Leu Pro Ile Tyr Glu Gly Ile Pro Val Leu Asn Cys
 145 150 155 160
 Trp Gly Ala Leu Pro Leu Gly Gly Lys Ala Leu His Lys Glu Leu Glu
 165 170 175
 Thr Gln Leu Leu Glu Gln Cys Thr Val Asp Thr Ser Val Ala Lys Glu
 180 185 190
 Gln Ser Leu Pro Ser Val Met Gly Ser Val Pro Glu Gly Val Leu Glu
 195 200 205
 Asp Ile Lys Ala Arg Thr Cys Phe Val Ser Asp Leu Lys Arg Gly Leu
 210 215 220
 Lys Ile Gln Ala Ala Lys Phe Asn Ile Asp Gly Asn Asn Glu Arg Pro
 225 230 235 240
 Ser Pro Pro Pro Asn Val Asp Tyr Pro Leu Asp Gly Glu Lys Ile Leu
 245 250 255
 His Ile Leu Gly Ser Ile Arg Asp Ser Val Val Glu Ile Leu Phe Glu
 260 265 270
 Gln Asp Asn Glu Glu Gln Ser Val Ala Thr Leu Ile Leu Asp Ser Leu
 275 280 285
 Ile Gln Cys Pro Ile Asp Thr Arg Lys Gln Leu Ala Glu Asn Leu Val
 290 295 300
 Val Ile Gly Gly Thr Ser Met Leu Pro Gly Phe Leu His Arg Leu Leu
 305 310 315 320
 Ala Glu Ile Arg Tyr Leu Val Glu Lys Pro Lys Tyr Lys Lys Ala Leu
 325 330 335
 Gly Thr Lys Thr Phe Arg Ile His Thr Pro Pro Ala Lys Ala Asn Cys
 340 345 350
 Val Ala Trp Leu Gly Gly Ala Ile Phe Gly Ala Leu Gln Asp Ile Leu
 355 360 365
 Gly Ser Arg Ser Val Ser Lys Glu Tyr Tyr Asn Gln Thr Gly Arg Ile
 370 375 380
 Pro Asp Trp Cys Ser Leu Asn Asn Pro Pro Leu Glu Met Met Phe Asp
 385 390 395 400
 Val Gly Lys Thr Gln Pro Pro Leu Met Lys Arg Ala Phe Ser Thr Glu
 405 410 415

Lys

<210> 65
 <211> 1752

6069-74A.SEQ.txt

<212> DNA

<213> Homo sapiens

<400> 65

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<210> 66

<211> 254

<212> PRT

<213> Homo sapiens

<400> 66

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Leu Arg Phe Thr Met Val Ala Leu Val Thr Val Cys Cys Pro Leu Val
          20             25             30
Ala Phe Leu Phe Cys Ile Leu Trp Ser Leu Leu Phe His Phe Lys Glu
          35             40             45
Thr Thr Ala Thr His Cys Gly Val Pro Asn Tyr Leu Pro Ser Val Ser
          50             55             60
Ser Ala Ile Gly Gly Glu Val Pro Gln Arg Tyr Val Trp Arg Phe Cys
          65             70             75             80
Ile Gly Leu His Ser Ala Pro Arg Phe Leu Val Ala Phe Ala Tyr Trp
          85             90             95
Asn His Tyr Leu Ser Cys Thr Ser Pro Cys Ser Cys Tyr Arg Pro Leu
          100            105            110
Cys Arg Leu Asn Phe Gly Leu Asn Val Val Glu Asn Leu Ala Leu Leu

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115 120 125
 Val Leu Thr Tyr Val Ser Ser Ser Glu Asp Phe Thr Ile His Glu Asn
 130 135 140
 Ala Phe Ile Val Phe Ile Ala Ser Ser Leu Gly His Met Leu Leu Thr
 145 150 155 160
 Cys Ile Leu Trp Arg Leu Thr Lys Lys His Thr Val Ser Gln Glu Asp
 165 170 175
 Arg Lys Ser Tyr Ser Trp Lys Gln Arg Leu Phe Ile Ile Asn Phe Ile
 180 185 190
 Ser Phe Phe Ser Ala Leu Ala Val Tyr Phe Arg His Asn Met Tyr Cys
 195 200 205
 Glu Ala Gly Val Tyr Thr Ile Phe Ala Ile Leu Glu Tyr Thr Val Val
 210 215 220
 Leu Thr Asn Met Ala Phe His Met Thr Ala Trp Trp Asp Phe Gly Asn
 225 230 235 240
 Lys Glu Leu Leu Ile Thr Ser Gln Pro Glu Glu Lys Arg Phe
 245 250

<210> 67
 <211> 781
 <212> DNA
 <213> Homo sapiens

<400> 67
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 aaaatatatt ttattcagtt ggctttctgt ggttggtgctc tcaaataatag tgtatgctta 660
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 a 781

<210> 68
 <211> 127
 <212> PRT
 <213> Homo sapiens

<400> 68
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 20 25 30
 Met Gly Leu Leu Thr Leu Tyr Cys Cys Tyr Arg Val Val Lys Ser Arg
 35 40 45

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Thr Met Met Phe Ser Leu Asp Thr Thr Thr Trp Glu Tyr Pro Asp Val
50 55 60
Cys Arg His Tyr Phe Gly Ser Phe Gly Gln Trp Ser Ser Leu Leu Phe
65 70 75 80
Ser Leu Val Ser Leu Ile Gly Ala Met Ile Val Tyr Trp Val Leu Met
85 90 95
Ser Asn Phe Leu Phe Asn Thr Gly Lys Phe Ile Phe Ser Lys Tyr Leu
100 105 110
Tyr His Met Leu Leu Thr Gln Tyr Phe Gln Ile Leu Leu Pro Leu
115 120 125

<210> 69
<211> 649
<212> DNA
<213> Homo sapiens

<400> 69
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gaaccccagg ggaaggtgca atacggagag cactttcggg ttcggcagaa tctaccagag 180
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actaataaaa ctattctgaa gaaaagaaaa aaaaaaaaaa aaaaaaaaaa 649

<210> 70
<211> 171
<212> PRT
<213> Homo sapiens

<400> 70
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20 25 30
Gln Gly Lys Val Gln Tyr Gly Glu His Phe Arg Ile Arg Gln Asn Leu
35 40 45
Pro Glu His Thr Gln Gly Trp Leu Gly Ser Lys Trp Leu Trp Leu Leu
50 55 60
Phe Val Val Val Pro Phe Val Ile Leu Gln Cys Gln Arg Asp Ser Glu
65 70 75 80
Lys Asn Lys Glu Gln Ser Pro Pro Gly Leu Arg Gly Gly Gln Leu His
85 90 95
Ser Pro Leu Lys Lys Lys Arg Asn Ala Ser Pro Asn Lys Asp Cys Ala
100 105 110
Phe Asn Thr Leu Met Glu Leu Glu Val Glu Leu Met Lys Phe Val Ser
115 120 125

6069-74A.SEQ.txt

Lys Val Arg Asn Leu Lys Arg Ala Met Ala Thr Gly Ser Gly Ser Asn
 130 135 140
 Leu Arg Leu Arg Lys Ser Glu Met Pro Ala Asp Pro Tyr His Val Thr
 145 150 155 160
 Ile Cys Glu Ile Trp Gly Glu Glu Ser Ser Ser
 165 170

<210> 71
 <211> 1456
 <212> DNA
 <213> Homo sapiens

<400> 71
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 Glu Tyr Phe Val Glu Gly Glu Thr Trp Asn Ile Asp Ser Cys Thr Gln
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<212> PRT

<213> Homo sapiens

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6069-74A.SEQ.txt

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<210> 76

<211> 457

<212> PRT

<213> Homo sapiens

<400> 76

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20 25 30

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35 40 45

Arg Trp His Pro Tyr Leu Glu Pro Tyr Gly Leu Val Tyr Cys Val Asn
50 55 60

Cys Ile Cys Ser Glu Asn Gly Asn Val Leu Cys Ser Arg Val Arg Cys

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Pro	Arg	Cys	Pro ₁₀₀	Asp	Ser	Leu	Pro	Pro ₁₀₅	Val	Asn	Asn	Lys	Val ₁₁₀	Ser
Lys	Ser	Cys ₁₁₅	Glu	Tyr	Asn	Gly	Thr ₁₂₀	Thr	Tyr	Gln	His	Gly ₁₂₅	Glu	Phe
Val	Ala ₁₃₀	Glu	Gly	Leu	Phe	Gln ₁₃₅	Asn	Arg	Gln	Pro	Asn ₁₄₀	Gln	Cys	Gln
Cys ₁₄₅	Ser	Cys	Ser	Glu	Gly ₁₅₀	Asn	Val	Tyr	Cys	Gly ₁₅₅	Leu	Lys	Thr	Pro ₁₆₀
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Thr	Glu ₃₇₀	Arg	Pro	Pro	Gln	Val ₃₇₅	Glu	Val	His	Val	Trp ₃₈₀	Thr	Ile	Lys
Gly ₃₈₅	Ile	Leu	Gln	His	Phe ₃₉₀	His	Ile	Glu	Lys	Ile ₃₉₅	Ser	Lys	Arg	Phe
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405

410

415

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<210> 77

<211> 2050

<212> DNA

<213> Homo sapiens

<400> 77

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<210> 78

<211> 505

<212> PRT

<213> Homo sapiens

<400> 78

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6069-74A.SEQ.txt

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 35 40 45
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 50 55 60
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 65 70 75 80
 Arg Ser Ile Gly Leu Pro Asp Val His Ser Gly Tyr Gly Phe Ala Ile
 85 90 95
 Gly Asn Met Ala Ala Phe Asp Met Asn Asp Pro Glu Ala Val Val Ser
 100 105 110
 Pro Gly Gly Val Gly Phe Asp Ile Asn Cys Gly Val Arg Leu Leu Arg
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 Thr Asn Leu Asp Glu Ser Asp Val Gln Pro Val Lys Glu Gln Leu Ala
 130 135 140
 Gln Ala Met Phe Asp His Ile Pro Val Gly Val Gly Ser Lys Gly Val
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 Ile Pro Met Asn Ala Lys Asp Leu Glu Glu Ala Leu Glu Met Gly Val
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 Asp Trp Ser Leu Arg Glu Gly Tyr Ala Trp Ala Glu Asp Lys Glu His
 180 185 190
 Cys Glu Glu Tyr Gly Arg Met Leu Gln Ala Asp Pro Asn Lys Val Ser
 195 200 205
 Ala Arg Ala Lys Lys Arg Gly Leu Pro Gln Leu Gly Thr Leu Gly Ala
 210 215 220
 Gly Asn His Tyr Ala Glu Ile Gln Val Val Asp Glu Ile Phe Asn Glu
 225 230 235 240
 Tyr Ala Ala Lys Lys Met Gly Ile Asp His Lys Gly Gln Val Cys Val
 245 250 255
 Met Ile His Ser Gly Ser Arg Gly Leu Gly His Gln Val Ala Thr Asp
 260 265 270
 Ala Leu Val Ala Met Glu Lys Ala Met Lys Arg Asp Lys Ile Ile Val
 275 280 285
 Asn Asp Arg Gln Leu Ala Cys Ala Arg Ile Ala Ser Pro Glu Gly Gln
 290 295 300
 Asp Tyr Leu Lys Gly Met Ala Ala Ala Gly Asn Tyr Ala Trp Val Asn
 305 310 315 320
 Arg Ser Ser Met Thr Phe Leu Thr Arg Gln Ala Phe Ala Lys Val Phe
 325 330 335
 Asn Thr Thr Pro Asp Asp Leu Asp Leu His Val Ile Tyr Asp Val Ser
 340 345 350

6069-74A.SEQ.txt

His Asn Ile Ala Lys Val Glu Gln His Val Val Asp Gly Lys Glu Arg
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 Thr Leu Leu Val His Arg Lys Gly Ser Thr Arg Ala Phe Pro Pro His
 370 375 380
 His Pro Leu Ile Ala Val Asp Tyr Gln Leu Thr Gly Gln Pro Val Leu
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 Ile Gly Gly Thr Met Gly Thr Cys Ser Tyr Val Leu Thr Gly Thr Glu
 405 410 415
 Gln Gly Met Thr Glu Thr Phe Gly Thr Thr Cys His Gly Ala Gly Arg
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 Ala Leu Ser Arg Ala Lys Ser Arg Arg Asn Leu Asp Phe Gln Asp Val
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 Leu Asp Lys Leu Ala Asp Met Gly Ile Ala Ile Arg Val Ala Ser Pro
 450 455 460
 Lys Leu Val Met Glu Glu Ala Pro Glu Ser Tyr Lys Asn Val Thr Asp
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<210> 79

<211> 1178

<212> DNA

<213> Homo sapiens

<400> 79

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<211> 310

<212> PRT

<213> Homo sapiens

6069-74A.SEQ.txt

<400> 80

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 35 40 45
 Ser Ser Gly Asn Ser Ser Ser Gly Asn Tyr Phe Thr Pro Gln Gln Thr
 50 55 60
 Ser Ser Phe Leu Lys Ser Pro Thr Pro Pro Pro Ser Ser Lys Pro Ser
 65 70 75 80
 Ser Ile Pro Arg Lys Ser Ser Val Asp Leu Asn Gln Val Ser Met Leu
 85 90 95
 Ser Pro Ala Ala Leu Ser Pro Ala Ser Ser Ser Gln Arg Thr Thr Ala
 100 105 110
 Thr Gln Val Met Ala Asn Ser Ala Gly Leu Asn Phe Ile Asn Val Val
 115 120 125
 Gly Ser Val Cys Gly Ala Gln Ala Leu Met Ser Gly Ser Asn Pro Met
 130 135 140
 Leu Gly Cys Asn Thr Gly Ala Ile Thr Pro Ala Gly Ile Asn Leu Ser
 145 150 155 160
 Gly Leu Leu Pro Ser Gly Gly Leu Leu Pro Asn Ala Leu Pro Ser Ala
 165 170 175
 Met Gln Ala Ala Ser Gln Ala Gly Val Pro Phe Gly Leu Lys Asn Thr
 180 185 190
 Ser Ser Leu Arg Pro Leu Asn Leu Leu Gln Leu Pro Gly Gly Ser Leu
 195 200 205
 Ile Phe Asn Thr Leu Gln Gln Gln Gln Gln Gln Leu Ser Gln Phe Thr
 210 215 220
 Pro Gln Gln Pro Gln Gln Pro Thr Thr Cys Ser Pro Gln Gln Pro Gly
 225 230 235 240
 Glu Gln Gly Ser Glu Gln Gly Ser Thr Ser Gln Glu Gln Ala Leu Ser
 245 250 255
 Ala Gln Gln Ala Ala Val Ile Asn Leu Thr Gly Val Gly Ser Phe Met
 260 265 270
 Gln Ser Gln Ala Ala Ala Val Ala Ile Leu Ala Ala Ser Asn Gly Tyr
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6069-74A.SEQ.txt

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 <213> Homo sapiens

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 <211> 94
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Arg Cys Gln Gln Thr Leu Val His Arg Arg Leu Pro Gln Leu Trp Ser
 50 55 60
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 65 70 75 80
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<210> 83
 <211> 832
 <212> DNA
 <213> Homo sapiens

<400> 83
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<211> 144
<212> PRT
<213> Homo sapiens

<400> 84

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Arg Tyr Phe Leu Ile Tyr Val Leu Thr Leu Thr Ala Ser Ala Ala Thr
50 55 60
Val Ala Ile Val Ser Thr Thr Phe Leu Val His Leu Val Val Met Ser
65 70 75 80
Asp Leu Tyr Gln Glu Thr Tyr Ile Asp Asp Leu Gly His Leu Pro Cys
85 90 95
Tyr Gly His Gly Leu Ser Tyr Ser Val Pro Val Pro Asp Phe Ser Thr
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Asp Cys Leu His Ala Gly Leu Cys Arg Gly Ser Glu Leu Pro Pro Gly
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<210> 85
<211> 3790
<212> DNA
<213> Homo sapiens

<400> 85

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6069-74A.SEQ.txt

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<210> 86
 <211> 940
 <212> PRT
 <213> Homo sapiens

<400> 86
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 Leu Arg Leu Ser Phe Ser Glu Ile Asn Thr Arg Val Ile Lys Glu Asp
 35 40 45
 Ile Val Arg Arg Glu Arg Ile Gly Phe Arg Val Gln Pro Asp Gln Gly
 50 55 60
 Lys Ile Phe Tyr Ser Ser Ile Lys Glu Met Lys Pro Pro Leu Arg Gly
 65 70 75 80

6069-74A.SEQ.txt

His Gly Lys Gly Ala Trp Gly Lys Glu Asn Val Arg Lys Thr Glu Glu
 85 90 95
 Ser Val Leu Lys Val Glu Val Asp Leu Asp Gln Thr Gln Arg Glu Arg
 100 105 110
 Lys Met Gln Asn Ala Leu Gly Arg Gly Lys Val Val Pro Leu Trp His
 115 120 125
 Pro Ala His Leu Gln Thr Leu Pro Val Thr Pro Asn Lys Gln Lys Thr
 130 135 140
 Asp Gly Arg Gly Thr Lys Pro Glu Ala Ser Ser His Gln Gly Thr Pro
 145 150 155 160
 Lys Gln Thr Thr Ala Gln Gly Ala Pro Lys Thr Ser Phe Ile Ala Ala
 165 170 175
 Lys Gly Thr Gln Val Val Lys Ile Ser Val His Met Gly Arg Val Ser
 180 185 190
 Leu Lys Gln Glu Pro Arg Lys Ser His Ser Pro Ser Ser Asp Thr Ser
 195 200 205
 Lys Leu Ala Ala Glu Arg Asp Leu Asn Val Thr Ile Ser Leu Ser Thr
 210 215 220
 Asp Arg Pro Lys Gln Arg Ser Gln Ala Val Ala Asn Glu Arg Ala His
 225 230 235 240
 Pro Ala Ser Thr Ala Val Pro Lys Ser Gly Glu Ala Met Ala Leu Asn
 245 250 255
 Lys Thr Lys Thr Gln Ser Lys Glu Val Asn Ala Asn Lys His Lys Ala
 260 265 270
 Asn Thr Ser Leu Pro Phe Pro Lys Phe Thr Val Asn Ser Asn Arg Leu
 275 280 285
 Arg Lys Gln Ser Ile Asn Glu Thr Pro Leu Gly Ser Leu Ser Lys Asp
 290 295 300
 Asp Gly Ala Arg Gly Ala His Gly Lys Lys Leu Asn Phe Ser Glu Ser
 305 310 315 320
 His Leu Val Ile Ile Thr Lys Glu Glu Glu Gln Lys Ala Asp Pro Lys
 325 330 335
 Glu Val Ser Asn Ser Lys Thr Lys Thr Ile Phe Pro Lys Val Leu Gly
 340 345 350
 Lys Ser Gln Ser Lys His Ile Ser Arg Asn Arg Ser Glu Met Ser Ser
 355 360 365
 Ser Ser Leu Ala Pro His Arg Val Pro Leu Ser Gln Thr Asn His Ala
 370 375 380
 Leu Thr Gly Gly Leu Glu Pro Ala Lys Ile Asn Ile Thr Ala Lys Ala
 385 390 395 400
 Pro Ser Thr Glu Tyr Asn Gln Ser His Ile Lys Ala Leu Leu Pro Glu
 405 410 415

6069-74A.SEQ.txt

Asp Ser Gly Thr His Gln Val Leu Arg Ile Asp Val Thr Leu Ser Pro
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 Arg Asp Pro Lys Ala Pro Gly Gln Phe Gly Arg Pro Val Val Val Pro
 435 440 445
 His Gly Lys Glu Lys Glu Ala Glu Arg Arg Trp Lys Glu Gly Asn Phe
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 Asn Val Tyr Leu Ser Asp Leu Ile Pro Val Asp Arg Ala Ile Glu Asp
 465 470 475 480
 Thr Arg Pro Ala Gly Cys Ala Glu Gln Leu Val His Asn Asn Leu Pro
 485 490 495
 Thr Thr Ser Val Ile Met Cys Phe Val Asp Glu Val Trp Ser Thr Leu
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 Leu Arg Ser Val His Ser Val Ile Asn Arg Ser Pro Pro His Leu Ile
 515 520 525
 Lys Glu Ile Leu Leu Val Asp Asp Phe Ser Thr Lys Asp Tyr Leu Lys
 530 535 540
 Asp Asn Leu Asp Lys Tyr Met Ser Gln Phe Pro Lys Val Arg Ile Leu
 545 550 555 560
 Arg Leu Lys Glu Arg His Gly Leu Ile Arg Ala Arg Leu Ala Gly Ala
 565 570 575
 Gln Asn Ala Thr Gly Asp Val Leu Thr Phe Leu Asp Ser His Val Glu
 580 585 590
 Cys Asn Val Gly Trp Leu Glu Pro Leu Leu Glu Arg Val Tyr Leu Ser
 595 600 605
 Arg Lys Lys Val Ala Cys Pro Val Ile Glu Val Ile Asn Asp Lys Asp
 610 615 620
 Met Ser Tyr Met Thr Val Asp Asn Phe Gln Arg Gly Ile Phe Val Trp
 625 630 635 640
 Pro Met Asn Phe Gly Trp Arg Thr Ile Pro Pro Asp Val Ile Ala Lys
 645 650 655
 Asn Arg Ile Lys Glu Thr Asp Thr Ile Arg Cys Pro Val Met Ala Gly
 660 665 670
 Gly Leu Phe Ser Ile Asp Lys Ser Tyr Phe Phe Glu Leu Gly Thr Tyr
 675 680 685
 Asp Pro Gly Leu Asp Val Trp Gly Gly Glu Asn Met Glu Leu Ser Phe
 690 695 700
 Lys Val Trp Met Cys Gly Gly Glu Ile Glu Ile Ile Pro Cys Ser Arg
 705 710 715 720
 Val Gly His Ile Phe Arg Asn Asp Asn Pro Tyr Ser Phe Pro Lys Asp
 725 730 735
 Arg Met Lys Thr Val Glu Arg Asn Leu Val Arg Val Ala Glu Val Trp
 740 745 750

6069-74A.SEQ.txt

Leu Asp Glu Tyr Lys Glu Leu Phe Tyr Gly His Gly Asp His Leu Ile
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Lys Lys Leu Lys Cys Lys Ser Phe Lys Trp Tyr Leu Glu Asn Val Phe
785 790 795 800
Pro Asp Leu Arg Ala Pro Ile Val Arg Ala Ser Gly Val Leu Ile Asn
805 810 815
Val Ala Leu Gly Lys Cys Ile Ser Ile Glu Asn Thr Thr Val Ile Leu
820 825 830
Glu Asp Cys Asp Gly Ser Lys Glu Leu Gln Gln Phe Asn Tyr Thr Trp
835 840 845
Leu Arg Leu Ile Lys Cys Gly Glu Trp Cys Ile Ala Pro Ile Pro Asp
850 855 860
Lys Gly Ala Val Arg Leu His Pro Cys Asp Asn Arg Asn Lys Gly Leu
865 870 875 880
Lys Trp Leu His Lys Ser Thr Ser Val Phe His Pro Glu Leu Val Asn
885 890 895
His Ile Val Phe Glu Asn Asn Gln Gln Leu Leu Cys Leu Glu Gly Asn
900 905 910
Phe Ser Gln Lys Ile Leu Lys Val Ala Ala Cys Asp Pro Val Lys Pro
915 920 925
Tyr Gln Lys Trp Lys Phe Glu Lys Tyr Tyr Glu Ala
930 935 940

<210> 87
<211> 1200
<212> DNA
<213> Homo sapiens

<400> 87
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<210> 88
 <211> 286
 <212> PRT
 <213> Homo sapiens

<400> 88

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Met Ser Tyr Ile Pro Gly Gln Pro Val Thr Ala Val Val Gln Arg Val
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Glu Ile His Lys Leu Arg Gln Gly Glu Asn Leu Ile Leu Gly Phe Ser
          20          25          30
Ile Gly Gly Gly Ile Asp Gln Asp Pro Ser Gln Asn Pro Phe Tyr Glu
          35          40          45
Asp Lys Thr Asp Lys Gly Ile Tyr Val Thr Arg Val Ser Glu Gly Gly
          50          55          60
Pro Ala Glu Ile Ala Gly Leu Gln Ile Gly Asp Lys Ile Met Gln Val
          65          70          75          80
Asn Gly Trp Asp Met Thr Met Val Thr His Asp Gln Ala Arg Lys Arg
          85          90          95
Leu Thr Lys Arg Ser Glu Glu Val Val Arg Leu Leu Val Thr Arg Gln
          100          105          110
Ser Leu Gln Lys Ala Cys Ser Ser His Ala Val Leu Ala Ala Thr Thr
          115          120          125
Ile Cys Asp Ser Cys Leu Pro Pro Leu Cys Thr Val Thr Pro Leu Pro
          130          135          140
His Ser Val Pro Ile Trp Leu Leu Leu Thr Ser Phe Leu Ser Trp Thr
          145          150          155          160
Pro Arg Ile Gly Asn Lys Gly Leu Glu Leu Ser Ser Ser Gln Ser Ala
          165          170          175
Val Thr Thr Gly Ser Gly Pro Thr Leu Leu Leu Gly His Ser Ser Gly
          180          185          190
Trp Ala Ser Gly Asn His Tyr Leu Leu Gly Ala Pro Lys Ser Trp Glu
          195          200          205
Met Leu Glu Glu Pro Gly Leu Ser Arg Phe Cys Leu Ala Ala Gly Leu
          210          215          220
Gly Ser Ala Pro Ala Pro Gln Pro Trp Cys Val His Thr Ala Val Leu
          225          230          235          240
Leu Pro Leu Gly Gly Leu Asp Thr His Pro Ala Arg Gly Ala Thr Lys
          245          250          255
Leu Cys Pro Asp Glu Ala Arg Trp Ala Pro Arg Ser Leu Pro Leu Ser
          260          265          270
Arg Gly Val Leu Ala Ser Pro Gly Phe Ala Phe Leu Arg Ile
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<210> 89

<211> 1023
 <212> DNA
 <213> Homo sapiens

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 tgtcttactt cctcatcacc ggaggaataa tttatgatgt tattgttgaa cctccaagtg 180
 tcggttctat gactgatgaa catgggcatc agaggccagt agctttcttg gcctacagag 240
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 ccctcttaac attttttgga gatgacattt ctgattttca gaaattaaca taaaatccag 840
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 aaa 1023

<210> 90
 <211> 149
 <212> PRT
 <213> Homo sapiens

<400> 90
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 20 25 30
 Val Tyr Ala Leu Val Val Val Ser Tyr Phe Leu Ile Thr Gly Gly Ile
 35 40 45
 Ile Tyr Asp Val Ile Val Glu Pro Pro Ser Val Gly Ser Met Thr Asp
 50 55 60
 Glu His Gly His Gln Arg Pro Val Ala Phe Leu Ala Tyr Arg Val Asn
 65 70 75 80
 Gly Gln Tyr Ile Met Glu Gly Leu Ala Ser Ser Phe Leu Phe Thr Met
 85 90 95
 Gly Gly Leu Gly Phe Ile Ile Leu Asp Arg Ser Asn Ala Pro Asn Ile
 100 105 110
 Pro Lys Leu Asn Arg Phe Leu Leu Leu Phe Ile Gly Phe Val Cys Val
 115 120 125
 Leu Leu Ser Phe Phe Met Ala Arg Val Phe Met Arg Met Lys Leu Pro
 130 135 140
 Gly Tyr Leu Met Gly
 145

<210> 91
 <211> 3901

<212> DNA

<213> Homo sapiens

<400> 91

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6069-74A.SEQ.txt

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<210> 92

<211> 392

<212> PRT

<213> Homo sapiens

<400> 92

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Met Glu Gly Val Ser Ala Leu Leu Ala Arg Cys Pro Thr Ala Gly Leu
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Ala Gly Gly Leu Gly Val Thr Ala Cys Ala Ala Ala Gly Val Leu Leu
          20          25          30

```

```

Tyr Arg Ile Ala Arg Arg Met Lys Pro Thr His Thr Met Val Asn Cys
          35          40          45

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```

Trp Phe Cys Asn Gln Asp Thr Leu Val Pro Tyr Gly Asn Arg Asn Cys
          50          55          60

```

```

Trp Asp Cys Pro His Cys Glu Gln Tyr Asn Gly Phe Gln Glu Asn Gly
          65          70          75          80

```

```

Asp Tyr Asn Lys Pro Ile Pro Ala Gln Tyr Leu Glu His Leu Asn His
          85          90          95

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Val Val Ser Ser Ala Pro Ser Leu Arg Asp Pro Ser Gln Pro Gln Gln
          100          105          110

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```

Trp Val Ser Ser Gln Val Leu Leu Cys Lys Arg Cys Asn His His Gln
          115          120          125

```

```

Thr Thr Lys Ile Lys Gln Leu Ala Ala Phe Ala Pro Arg Glu Glu Gly
          130          135          140

```

```

Arg Tyr Asp Glu Glu Val Glu Val Tyr Arg His His Leu Glu Gln Met
          145          150          155          160

```

```

Tyr Lys Leu Cys Arg Pro Cys Gln Ala Ala Val Glu Tyr Tyr Ile Lys
          165          170          175

```

```

His Gln Asn Arg Gln Leu Arg Ala Leu Leu Leu Ser His Gln Phe Lys
          180          185          190

```

```

Arg Arg Glu Ala Asp Gln Thr His Ala Gln Asn Phe Ser Ser Ala Val
          195          200          205

```

```

Lys Ser Pro Val Gln Val Ile Leu Leu Arg Ala Leu Ala Phe Leu Ala
          210          215          220

```

```

Cys Ala Phe Leu Leu Thr Thr Ala Leu Tyr Gly Ala Ser Gly His Phe
          225          230          235          240

```

```

Ala Pro Gly Thr Thr Val Pro Leu Ala Leu Pro Pro Gly Gly Asn Gly
          245          250          255

```

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Ser Ala Thr Pro Asp Asn Gly Thr Thr Pro Gly Ala Glu Gly Trp Arg

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260

265

270

Gln Leu Leu Gly Leu Leu Pro Glu His Met Ala Glu Lys Leu Cys Glu
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 Arg Arg Ile Asp Ala Phe Cys Thr Cys Leu Trp Ala Leu Leu Leu Gly
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 Asn Thr Leu Lys Phe Ser Thr Thr Ser Leu Cys Cys Leu Val Gly Phe
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<211> 2203

<212> DNA

<213> Homo sapiens

<400> 93

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6069-74A.SEQ.txt

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<400> 94

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Lys Val His Leu Asp Ser Ala Val Ala Leu Ala Ala Glu Ser Pro Val
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Asn Met Met Pro Trp Gln Gly Asp Thr Asn Asn Met Ile Asp Arg Phe
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Asp Val Arg Ala His Leu Asp His Ile Pro Asp Tyr Thr Pro Pro Leu
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Leu Thr Thr Ile Ser Pro Glu Gln Glu Ser Asp Glu Arg Lys Cys Asn
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Tyr Glu Arg Tyr Arg Gly Leu Val Gln Asn Asp Phe Ala Gly Ile Ser
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Glu Glu Gln Cys Leu Tyr Gln Ile Tyr Ile Asp Glu Leu Tyr Gly Gly
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Leu Gln Arg Pro Ser Glu Asp Glu Lys Lys Lys Leu Ala Glu Lys Lys
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Ala Ser Ile Gly Tyr Thr Tyr Glu Asp Ser Thr Val Ala Glu Val Glu
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Lys Ala Ala Glu Lys Pro Glu Glu Glu Glu Ser Ala Ala Glu Glu Glu
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Ser Asn Ser Asp Glu Asp Glu Val Ile Pro Asp Ile Asp Val Glu Val
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Ala Thr Thr Tyr Gly Met Ala Asp Gly Asp Phe Val Arg Met Leu Arg
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Lys	Leu	Lys	Leu	Arg	Met	Gln	Lys	Ala	Leu	Asn	Arg	Gln	Phe	Lys	Ala
			580					585					590		
Asp	Lys	Lys	Ala	Ala	Gln	Glu	Lys	Met	Ile	Gln	Gln	Glu	His	Glu	Arg

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Lys Glu Arg Glu Arg Arg Glu Lys Glu Arg Glu Glu Trp Glu Arg Gln
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Arg His

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<212> DNA
<213> Homo sapiens

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<210> 96
<211> 204
<212> PRT
<213> Homo sapiens

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35 40 45
Gln Tyr Gln Arg Met Leu Ser Thr Leu Ser Gln Cys Glu Phe Ser Met
50 55 60
Gly Lys Thr Leu Leu Val Tyr Asp Met Asn Leu Arg Glu Met Glu Asn
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Tyr Glu Lys Ile Tyr Lys Glu Ile Glu Cys Ser Ile Ala Gly Ala His
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 Glu Lys Ile Ala Glu Cys Lys Lys Gln Ile Leu Gln Ala Lys Arg Ile
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 Arg Lys Asn Arg Gln Glu Tyr Asp Ala Leu Ala Lys Val Ile Gln His
 115 120 125
 His Pro Asp Arg His Glu Thr Leu Lys Glu Leu Glu Ala Leu Gly Lys
 130 135 140
 Glu Leu Glu His Leu Ser His Ile Lys Glu Ser Val Glu Asp Lys Leu
 145 150 155 160
 Glu Leu Arg Arg Lys Gln Phe His Val Leu Leu Ser Thr Ile His Glu
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 <212> DNA
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<210> 98
 <211> 97
 <212> PRT
 <213> Homo sapiens

<400> 98
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 Asp Ile Glu Glu Lys Lys Ser Ile Lys Lys Lys Ile Lys Glu Leu Lys
 35 40 45

6069-74A.SEQ.txt

Phe Leu Asp Ser Lys Ile Ala Gln Asn Leu Cys Lys Tyr His Ile Pro
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Ile Pro Phe Lys Asp Ser Gly Asn Ile Ser Leu Asn Asp Phe Ile Phe
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Phe Lys Thr Asp Tyr Ser Leu Phe Ala Ile Phe Ile Leu Leu Leu Tyr
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<210> 99

<211> 1375

<212> DNA

<213> Homo sapiens

<400> 99

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<210> 100

<211> 132

<212> PRT

<213> Homo sapiens

<400> 100

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Cys Arg Gly Ser Trp Gln Leu Leu Gly Glu Val Ser Trp His Arg Leu
 35 40 45

Thr Leu Leu Ser Gly Thr Thr Ser Phe Pro Phe Glu Glu Thr Ala Thr
 50 55 60

Ala Val Ala Lys Ala Ala Ala Ala Pro Ala Met Arg Val Tyr Ile Phe
 65 70 75 80

6069-74A.SEQ.txt

Phe Thr Gln Ser Ser Gly Ile Val His Leu Phe Phe Lys Thr Gln Arg
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Val Gln Thr Leu Leu Tyr Ser Asp Leu Ser Cys Ser Cys Ser Lys Asn
115 120 125
Pro Leu Trp Thr
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<210> 101
<211> 1213
<212> DNA
<213> Homo sapiens

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<210> 102
<211> 100
<212> PRT
<213> Homo sapiens

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Lys His Phe Ser Ser Ile Cys Leu His Ala Gln Gly Ser Ser Arg Leu
35 40 45
Pro Val Leu Ser Thr Gly Thr Ala Val Ser Glu Leu Leu Arg Thr Ser
50 55 60
Leu Cys Gln Val Val Glu Leu Gly Pro Ser Pro Tyr Leu Ser Leu Val
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Pro Thr Val Leu Leu Thr Val Gln His Leu Gly Ala Leu Ala Trp Gly
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Trp Arg Pro Trp
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 <211> 1036
 <212> DNA
 <213> Homo sapiens

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 aaaaaaaaaa aaaaaa 1036

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 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 104
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 Tyr Glu Phe Glu Ile Thr Asp Leu Phe Ser Ser Tyr Cys Ile His Ile
 35 40 45
 Asn Ile Cys Glu Phe Val Val Gln Leu Phe Ile Gln Thr Lys Asn Ile
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6069-74A.SEQ.txt

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 65 70 75 80
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90

95

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425

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6069-74A.SEQ.txt

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Ser His Leu Pro Trp Glu Ser Pro His Ala Pro Ala Pro Pro Ala Ala
  65           70           75           80

Pro Gly Asp Phe Asp Tyr Leu Gly Pro Ser Ala Ser Ser Gln Met Ser
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Ala His Gln Asp Leu Asn Asp Lys Arg Thr Pro Glu Glu Arg Leu Pro
      130          135          140

Glu Val Val Pro Leu Leu Asn Arg Asp Gln Asn Gln Ala Leu Val Gln
      145          150          155          160

Leu Pro Arg Leu Lys Trp Val Gln Thr Thr Asp Leu Asp Arg Ala Ala
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          180          185          190

Arg Pro Thr Lys Phe Val Val Ser Pro Lys Asn Leu Lys Lys Asp Leu
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6069-74A.SEQ.txt

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 Ala Asp Glu Pro Pro Gly Pro Pro Glu Gln Val Gly Leu Ser Gln Phe
 260 265 270
 His Leu Glu Pro Lys Ser Gln Asn Pro Glu Thr Leu Glu Asp Ile Gln
 275 280 285
 Ser Ser Ser Leu Gln Glu Glu Ala Pro Ala Gln Leu Leu Gln Leu Pro
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 370 375 380
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 385 390 395 400
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 450 455 460
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 485 490 495
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 Ser Thr Asn Ile Cys Glu Leu Cys Thr Cys Gly Asp Glu Thr Leu Ser
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 675 680 685
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 His Val Ile Arg Thr Leu Lys Met Glu Cys Ser Glu Thr His Val Gln
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 Gly Ser Cys Ala Lys Leu Met Ser Arg Thr Gly Leu Leu Met Lys Leu
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6069-74A.SEQ.txt

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6069-74A.SEQ.txt

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 <213> Homo sapiens

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 35 40 45
 Thr Ala Ala Pro His Thr His Pro Pro Ala Leu Tyr His Leu Leu Cys
 50 55 60
 Phe Val Phe Leu Cys Arg Ile His Asp Phe Leu Lys Tyr Asn Phe Phe
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 Asn Val Tyr Ile Leu Tyr Ala Phe Ser His Ser Tyr Val Lys Ser Gly
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<210> 113
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<210> 114
 <211> 99
 <212> PRT
 <213> Homo sapiens

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 His Ala Met Arg Arg Leu Ile Asn Leu Leu Arg Gln Ser Gln Ser Tyr
 20 25 30
 Cys Thr Asp Thr Glu Cys Leu Gln Glu Leu Pro Gly Pro Ser Gly Asp
 35 40 45
 Asn Gly Ile Ser Val Thr Met Ile Leu Val Ala Trp Met Val Ile Ala
 50 55 60
 Leu Ile Leu Phe Leu Leu Arg Pro Pro Asn Leu Arg Gly Ser Ser Leu
 65 70 75 80
 Pro Gly Lys Pro Thr Ser Pro His Asn Gly Gln Asp Pro Pro Ala Pro
 85 90 95
 Pro Val Asp

<210> 115
 <211> 1404
 <212> DNA
 <213> Homo sapiens

<400> 115
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6069-74A.SEQ.txt

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<210> 116

<211> 184

<212> PRT

<213> Homo sapiens

<400> 116

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          20          25          30
Phe Arg Ser Leu Pro Arg His Thr Phe Gly Leu Val Gln Ser Lys Leu
          35          40          45
Phe Pro Phe Tyr Phe His Ile Ser Met Gly Cys Ala Phe Ile Asn Leu
          50          55          60
Cys Ile Leu Ala Ser Gln His Ala Trp Ala Gln Leu Thr Phe Trp Glu
          65          70          75          80
Ala Ser Gln Leu Tyr Leu Leu Phe Leu Ser Leu Thr Leu Ala Thr Val
          85          90          95
Asn Ala Arg Trp Leu Glu Pro Arg Thr Thr Ala Ala Met Trp Ala Leu
          100          105          110
Gln Thr Val Glu Lys Glu Arg Gly Leu Gly Gly Glu Val Pro Gly Ser
          115          120          125
His Gln Gly Pro Asp Pro Tyr Arg Gln Leu Arg Glu Lys Asp Pro Lys
          130          135          140
Tyr Ser Ala Leu Arg Gln Asn Phe Phe Arg Tyr His Gly Leu Ser Ser
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<210> 118
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 <212> PRT
 <213> Homo sapiens

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 20 25 30
 Arg Glu Arg Cys Tyr Asp Gln Thr Glu Pro Phe Ser Leu Pro Ser Val
 35 40 45
 His Gly Phe Ser Trp Leu Cys Gly Pro Val Ser Cys His Ser Phe Thr
 50 55 60
 Pro Asn Phe Trp Asp Ile Gln Gly Asn Asn Leu Ala Thr Gly Tyr Leu
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<220>
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<220>
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<400> 120
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<210> 121
 <211> 29
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<210> 125
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<220>
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<400> 125
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<210> 126
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<220>
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<400> 126

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 35 40 45
 Gln Met Lys Ile Ile Arg Asp Ser Thr Pro Asn Gln Tyr Met Val Leu
 50 55 60
 Ile Lys Phe Arg Ala Gln Ala Asp Ala Asp Ser Phe Tyr Met Thr Cys
 65 70 75 80
 Asn Gly Arg Gln Phe Asn Ser Ile Glu Asp Asp Val Cys Gln Leu Val
 85 90 95
 Tyr Val Glu Arg Ala Glu Val Leu Lys Ser Glu Asp Gly Ala Ser Leu
 100 105 110

6069-74A.SEQ.txt

Pro Val Met Asp Leu Thr Glu Leu Pro Lys Cys Thr Val Cys Leu Glu
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 Arg Met Asp Glu Ser Val Asn Gly Ile Leu Thr Thr Leu Cys Asn His
 130 135 140
 Ser Phe His Ser Gln Cys Leu Gln Arg Trp Asp Asp Thr Thr Cys Pro
 145 150 155 160
 Val Cys Arg Tyr Cys Gln Thr Pro Glu Pro Val Glu Glu Asn Lys Cys
 165 170 175
 Phe Glu Cys Gly Val Gln Glu Asn Leu Trp Ile Cys Leu Ile Cys Gly
 180 185 190
 His Ile Gly Cys Gly Arg Tyr Val Ser Arg His Ala Tyr Lys His Phe
 195 200 205
 Glu Glu Thr Gln His Thr Tyr Ala Met Gln Leu Thr Asn His Arg Val
 210 215 220
 Trp Asp Tyr Ala Gly Asp Asn Tyr Val His Arg Leu Val Ala Ser Lys
 225 230 235 240
 Thr Asp Gly Lys Ile Val Gln Tyr Glu Cys Glu Gly Asp Thr Cys Gln
 245 250 255
 Glu Glu Lys Ile Asp Ala Leu Gln Leu Glu Tyr Ser Tyr Leu Leu Thr
 260 265 270
 Ser Gln Leu Glu Ser Gln Arg Ile Tyr Trp Glu Asn Lys Ile Val Arg
 275 280 285
 Ile Glu Lys Asp Thr Ala Glu Glu Ile Asn Asn Met Lys Thr Lys Phe
 290 295 300
 Lys Glu Thr Ile Glu Lys Cys Asp Asn Leu Glu His Lys Leu Asn Asp
 305 310 315 320
 Leu Leu Lys Glu Lys Gln Ser Val Glu Arg Lys Cys Thr Gln Leu Asn
 325 330 335
 Thr Lys Val Ala Lys Leu Thr Asn Glu Leu Lys Glu Glu Gln Glu Met
 340 345 350
 Asn Lys Cys Leu Arg Ala Asn Gln Val Leu Leu Gln Asn Lys Leu Lys
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<211> 171

<212> PRT

<213> Homo sapiens

<400> 178

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6069-74A.SEQ.txt

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Ser Gly Val Leu Ser Ser Ile Gly Lys Ile Phe Lys Glu Glu Gly Leu
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50 55 60
Phe Leu Trp Gly Cys Asn Leu Leu Ala His Phe Ile Asn Ala Tyr Leu
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Val Asp Asp Ser Phe Ser Gln Ala Leu Ala Ile Arg Ser Tyr Thr Lys
85 90 95
Phe Val Met Gly Ile Ala Val Ser Met Leu Thr Tyr Pro Phe Leu Leu
100 105 110
Val Gly Asp Leu Met Ala Val Asn Asn Cys Gly Leu Gln Ala Gly Leu
115 120 125
Pro Pro Tyr Ser Pro Val Phe Lys Ser Trp Ile His Cys Trp Lys Tyr
130 135 140
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Glu Leu Leu Leu Leu Leu Leu His Leu Gln Trp Gly Leu Gly Leu Leu
35 40 45
Arg Gln Leu His His Lys Arg Leu Ala Gln Leu Leu Leu His Arg Arg
50 55 60
Arg Asp His Pro Ile Pro Pro Ile Gln Asp Ile Leu Gly Ile Ala Lys
65 70 75 80
Cys Pro Cys Pro Trp Ala Ile Ile Leu Met Arg Met Ala Ser Ile Ile
85 90 95
Cys His Ile His Gln Cys Ile Thr Arg Val Leu Asp Arg Leu His Thr
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135

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Lys Leu Ala Pro Thr Trp Arg Ala Ala Ala Thr Cys Phe Leu Gln
20 25 30

His Leu Leu Pro Cys Ser Val Ser Ser Leu Ser Pro Arg Leu Ala Gln
35 40 45

Glu Cys Trp Lys Ser Ser Arg Leu Gly Leu Gly Ala Trp Pro Leu Asp
50 55 60

Ile Pro Arg Ala Ser Pro Val Leu Pro Ser Pro Arg Thr Thr Gly Pro
65 70 75 80

Leu Ala

FITZPATRICK, CELLA, HARPER & SCINTO

To	Docketing and File	DATE
FROM		FILE
SUBJECT BENEFIT UNDER 35 U.S.C. § 120 OF PARENT(S) FOR CONTINUATIONS OR DIVISIONALS FILED UNDER 37 C.F.R. § 1.53(b), ETC.		

The following checked items identify whether Amendments have been filed in the subject application and all parent applications to ensure benefit under 35 U.S.C. § 120, and whether an Information Disclosure Statement has been filed:

SELECT A(1) OR A(2)

A(1) ☐ **A PRELIMINARY AMENDMENT IS BEING FILED CONCURRENTLY WITH THIS APPLICATION.** The Preliminary Amendment cancels any claims not to be examined in the subject application, and also amends the specification to cross reference each parent application and to incorporate the parent application(s) by reference. Check one of the following:

☐ The parent application is not a divisional or continuation of an earlier application.

☐ I have checked all the parent applications (i.e., including grandparents, etc.) that are divisionals or continuations of earlier applications, and the specification has been amended in each such application, where required, to identify all appropriate continuing data.

A(2) ☐ **PLEASE DOCKET A PRELIMINARY AMENDMENT TO BE FILED NO LATER THAN TWO WEEKS FROM TODAY.**

SELECT B(1) OR B(2)

B(1) ☐ **AN INFORMATION DISCLOSURE STATEMENT IS BEING FILED CONCURRENTLY WITH THIS APPLICATION.** The IDS cites all the references of record from the parent application(s).

B(2) ☐ **PLEASE DOCKET AN INFORMATION DISCLOSURE STATEMENT TO BE FILED NO LATER THAN TWO WEEKS FROM TODAY.**

(attorney's initials)

** A copy of this memo is to be placed in the file.



UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>	Attorney Docket No.	00766.000101.1
	First Named Inventor or Application Identifier	
	KENNETH JACOBS	
	Express Mail Label No.	

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	ADDRESS TO: Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
--	--

<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form (Submit an original, and a duplicate for fee processing)</p> <p>2. <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.</p> <p>3. <input checked="" type="checkbox"/> Specification Total Pages <input type="text" value="295"/></p> <p>4. <input checked="" type="checkbox"/> Drawing(s) (35 USC 113) Total Sheets <input type="text" value="2"/></p> <p>5. <input checked="" type="checkbox"/> Oath or Declaration Total Pages <input type="text"/></p> <p style="margin-left: 20px;">a. <input type="checkbox"/> Newly executed (original or copy)</p> <p style="margin-left: 20px;">b. <input checked="" type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 17 completed)</p> <p style="margin-left: 40px;">i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed Statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</p> <p>6. <input checked="" type="checkbox"/> Application Data Sheet. See 37 CFR 1.76</p>	<p>7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (<i>Appendix</i>)</p> <p>8. <input type="checkbox"/> Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> Computer Readable Form (CRF)</p> <p style="margin-left: 20px;">b. Specification Sequence Listing on:</p> <p style="margin-left: 40px;">i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or</p> <p style="margin-left: 40px;">ii. <input type="checkbox"/> paper</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> Statements verifying identity of above copies</p>
ACCOMPANYING APPLICATION PARTS	
<p>9. <input type="checkbox"/> Assignment Papers (cover sheet & document(s))</p> <p>10. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney (when there is an assignee)</p> <p>11. <input type="checkbox"/> English Translation Document (if applicable)</p> <p>12. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations</p> <p>13. <input checked="" type="checkbox"/> Preliminary Amendment</p> <p>14. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Should be specifically itemized)</p> <p>15. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed)</p> <p>16. <input type="checkbox"/> Other: _____</p>	

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:

<input checked="" type="checkbox"/> Continuation	<input type="checkbox"/> Divisional	<input type="checkbox"/> Continuation-in-part (CIP) of prior application No. <u>09 / 306,111</u>
--	-------------------------------------	--

Prior application information: Examiner _____ Group/Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

18. CORRESPONDENCE ADDRESS					
<input checked="" type="checkbox"/> Customer Number or Bar Code Label		<input type="text" value="05514"/> (Insert Customer No. or Attach bar code label here)		or <input type="checkbox"/> Correspondence address below	
NAME					
Address					
City	State	Zip Code			
Country	Telephone	Fax			



CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
	TOTAL CLAIMS (37 CFR 1.16(c))	22-20 =	2	X \$ 18.00 =	\$36.00
	INDEPENDENT CLAIMS (37 CFR 1.16(b))	-3 =		X \$ 86.00 =	\$
	MULTIPLE DEPENDENT CLAIMS (if applicable) (37 CFR 1.16(d))			\$290.00 =	\$
				BASIC FEE (37 CFR 1.16(a))	\$770.00
			Total of above Calculations =		\$
	Reduction by 50% for filing by small entity (Note 37 CFR 1.9, 1.27, 1.28).				
	TOTAL =				\$

19. Small entity status

- a. ☐ A small entity statement is enclosed
- b. ☐ A small entity statement was filed in the prior nonprovisional application and such status is still proper and desired.
- c. ☐ Is no longer claimed.

20. ☒ A check in the amount of \$ _____ to cover the filing fee is enclosed.

21. ☐ A check in the amount of \$ _____ to cover the recordal fee is enclosed.

22. The Commissioner is hereby authorized to credit overpayments or charge the following fees to Deposit Account No. 06-1205:

- a. ☒ Fees required under 37 CFR 1.16.
- b. ☒ Fees required under 37 CFR 1.17.
- c. ☐ Fees required under 37 CFR 1.18.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED	
NAME	George K. Ng, Reg. 54,334
SIGNATURE	
DATE	April 8, 2004

